WITK

The Spark Gap

JANUARY 1985

Book X Vol I

Official Journal of the Wellesley Amateur Radio Society

It Seems to Me...

by Nels Anderson, K1UR

Happy New Year everyone! The end of 1984 was not particularly good for the club, what with the cancelling of the message fair when we were unable to find a location plus the cancelling of the flea market a bit earlier. In addition, we are still short of people for leadership positions which is really the major problem (note the holes in the list of officers). Those of us who are really active in making the club go have a really good time doing it, but the way things are going too much responsibility is being held by too few people.

Anyway, it's a new year and time for a new start. In this category, by the time you read this the new repeater should have finally arrived, quite a bit late but heartily welcome anyway. Apparently the manufacturer had some problems in the final testing, including a defective transmitter crystal which required them to reorder thus causing quite a delay in delivery. Full details on the new machine should be in the next issue but in the meantime get on the air and try it out! By the way, the repeater loan is still not paid off, so if you have not sent in a donation towards it, please do so! It is still very much needed.

Also, we have confirmed a date with the church for our annual auction. Due to a heavy schedule at the hall for April, we have been forced to move the date up, so the auction will be held this year on Saturday, March 30. The times are unchanged, 10:00 a.m. for check-in and the auctioneering starting at 11:00. Please help spread the word! We really could use a good turnout.

We also have a General Class that will be finishing up this month. A Novice Class is also planned to start in February, but the exact date has not yet been decided. We do have the teachers though so it is definitely on, so if you know anyone who would be interested, please send them our way.

Well, that's the news at the start of this new year. Hope everyone had a good holiday season.

WARS NET

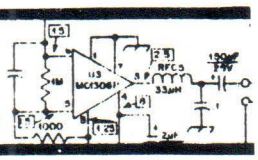
Just a reminder that the weekly meetings of the W.A.R.S. net continue to be held Sunday evenings at 7:00 p.m. on the Wellesley 147.63/03 repeater. With the holidays now out of the way, let's see a good turnout for the first net of the new year, Sunday January 6th!

MEETINGS THIS MONTH:
January 3, 1985, at 7:30 p.m.
January 17, 1985, at 7:30 p.m.
211 Washington St., Wellesley

"New Tickets"

As we mentioned last month Thomas Burton passed his Extra class exam, and he has now received his new call-sign. Look for Thomas on the air as KX1H instead of N1BCQ. Congratulations!

Tek Tok



HISTORY OF RTTY

from Mike and Key, Cincinnati ARA via ARNS

In 1906 the first American teletypewriter was invented and a company called "Morkrum Company" was formed by the inventor, Charles Krum and financier Joy Morton (of the Morton Salt Company) to market it. The young company had a pretty rough go of it until 1915 when the Associated Press decided to use the Morkrum equipment. At about the same time, a German immigrant, Edward Kleinschmidt, was independently manufacturing a machine bearing his name.

In 1925 these two companies were merged and the combined company was then purchased in 1930 by Western Electric--the manufacturing branch of Bell Telephone Company. At this time the company changed its name to Teletype Company. Kleinschmidt then came out with a new machine and he formed the Kleinschmidt Company to manufacture it.

In the U.S. Amateur RTTY started about 1946. On both coasts, groups started using RTTY on 2 and 80 meters. On the lower frequencies MAB (make before break) keying was used. It sounded like high speed CW. The pulse length on a teleprinter machine is quite short and it was soon found that MAB was not as satisfactory as leaving the transmission keyed and shifting the carrier in frequency to correspond to the parts of the different letter This was allowed on 11 meters, which was then an Amateur band, and he some of the important contributio... were first made using FSK (frequency shift keying). On VHF, the regulations allowed audio tones to be sent on an AM carrier instead of shifting the carrier itself. This is used to this day, but most of the VHF use is now FM instead of AM. This method, called AFSK (audio frequency shift keying), is quite easy to do and allowed the transmitters to be very simple. In 1953 the FCC modified the rules to permit FSK to be used on HF using 850 hz shift only. However, many commercial stations using RTTY had found that certain problems could be minimized by the use of shifts more narrow than 850. Amateurs also wanted the opportunity to experiment with these narrow shifts, and in March of 1956 it became possible to use "any shift up to 900 hz." With the advance of computers in Amateur Radio the FCC, in 1980, permitted the use of ASCII the HF and VHF bands.

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The Spark Gap

Official Journal of the Wellesley Amateur Radio Society

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THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, FCC RULES AND REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SEND THEIR ARTICLES TO THE EDITOR. ITEMS PRINTED IN THE "SPARK GAP" MAY BE REPRINTED BY OTHER AMATEUR RADIO PUBLICATIONS PROVIDED THE AUTHOR AND THE "SPARK GAP" ARE GIVEN CREDIT.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS $8.00. THE CLUB YEAR RUNS SEPTEMBER 1 TO AUGUST 31. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST. TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
211 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181

MINUTES

Meeting of December 6, 1984:

Meeting opened at 7:52 p.m. by K1UR.

Secretary's report accepted.

Treasurers report accepted.

Thomas, KX1H (ex-N1BCQ), was asked to check on renting the Church for our auction on April 13, 1985. (Secretary's note: We have found that the church is not available this day. We are investigating further)

Repeater Report: Any day now...

Education Report: General class proceeding. Need Extra class volunteer examiners. On January 2, KA1IU; January 9, KT1K; January 16, N1ADY; January 23, K1UR.

It was announced effective January 1, 1985 K1KI will be new N.E. Division Director, K1PAD Vice Director, WA4STO EMA Section Manager.

'Wait for SSTV from the Space Shuttle next year' was a quote in many a member's mouth after KA1IU announced that this was most likely going to happen.

Next meeting will be the first Thursday of January, the 3rd.

Meeting closed 8:20 p.m.

Hearabouts....

by Skid Schermerhorn, W1TTY

Last winter, the New England Packet Radio Association (NEPRA) gave an exciting demonstration to the W.A.R.S. Having been involved with computers for twenty-five years and a newcomer to personal computers, I was severely bitten by the packet bug. Seeing the equipment used and a copy of the NEPRA PacketEar containing a diagram of an interface and a dumb terminal emulator adaptable to my Commodore 64 was the final part of the "bite." I was hooked!

All that was needed, besides cash, ws to decide on a "Cadillac" or a "Chevy" system. Never having had a Caddy, that's what I chose. Besides, building a TAPR (Tuscon Amateur Packet Radio) terminal node controller (TNC) turned out to be a real learning experience--it didn't work right off. With hints from the PacketEar and a sympathetic ear (Mort, KA1IU), it ran! Proud of myself? You bet--and that was only the beginning.

In May, the first packet station was on in Wellesley and as of now (December 1984), is still the only one. The same station became the first packet on Cape Cod during the summer.

So, what use do I make of packet?

-- I enjoy helping newcomers as I was helped when I first got onto 145.010 MHz.

-- Helping with demonstrations and "selling" packet is fun and rewarding.

-- Tailoring my own version of a terminal emulator for my C64 keeps me learning and gives me just what I prefer rather than just a copy of someone elses ideas.

--Each day is a learning experience, trying out my own ideas and trying out other peoples implementations of their pet ideas.

-- Keeping current in a fast moving new mode of operation leads to checking PBBS's (packet bulletin board systems). From Wellesley, I have been connected to W0RLI/1, Westford; K1BC, Lexington; and KA1T, Harvard (dedicated to message handling), K7PYK, Scottsdale, AZ; W1AW-4, Newington, CT; and heard (saw) one in West Germany (I didn't call him because I don't know German!).

-- Arizona and Germany were not on 2 meters! In those cases, I linked through a gateway station to 20 meters. When all is up and running, it is possible to even go through OSCAR 10. Chances of doing that are many times greater than contacting a space shuttle. Through the gateways, I have contacted Texas, South Carolina, etc., and the options grow all the time.

-- Casual QSO's? You bet! You know a few of them: N1CPE, N1ADY, K1UR (via N1CPE and twisted pair). Several times a week I chat with the guys at company radio clubs (Foxboro Company, Honeywell, MITRE). Also, because of being at the Cape in the summer, there are several stations I keep up with in North Eastham, Mattapoisett, Edgartown, etc. There's lots of swapping of ideas, programs, copies of write-ups, etc. These "DX" contacts are all via other packet stations in a mode called digipeating (digital repeating, which is done even as you use your own station).

-- Know what CP/M is? Well, it is available in Wellesley. Your keyboard and screen are a remote terminal for a system run by K1OJH, Billerica (he's President of NEPRA). Because I have one or more of the Wellesley hills in the way, I have to digipeat throu another station.

-- In the works here from a hardware standpoint are several project LED indicators of connect status and alert tone, remote control of station, portable emergency power for the board, more power, and on and on.

What Wellesley could use now is several more packet stations. We could be of great use in public service events (done already in another town), message handling, and more.

As you can see if you have read this far, I am completely sold on packet. It is really a microcosm of ham radio. And what is being done now is only at about level 2 1/2 of seven levels of the protocol (AX.25) which was adopted by ARRL (see OST, December 1984, page 35).

Finally, I'd like to be your packet "Elmer!"

Hamnews

NASA is considering scrubbing the Spacelab-3 mission slated for late 1985 as one way of catching up on the much delayed schedule of comemrcial shuttle flights, according to Aviation Week magazine. If Spacelab-3 is cancelled, it will mean that both the experiments and crew members will be reassigned to later flights, probably in the 1986 or later time frame. One of those scheduled as a crew member on Spacelab-3 is Amateur Radio's first "ham in space," Dr. Owen Garriott, W5LFL. Owen had hoped to take his gear into orbit once again next year; however, that hope appears to be dwindling as NASA reorganizes its overall launch timetable. Meanwhile, the April, 1985 Spacelab-2 mission, which will carry astronauts Tony England, W0ORE; and John David Bartoe, W4NYZ, may slip in launch date to September or October, 1985, according to a number of rumors coming from NASA.

Westlink Report, December 14, 19

CHUCKLE KORNER

Martians Now Using Earthly Ether

by Tom Kinahan, N1CPE

Its been some time now since I last reported on the squabble between the FCC and the MCC (Martian Communications Commission) and I feel its time we let you know whats been happening on this front.

You will note that some time ago we reported that the MCC had allocated the ether surrounding the earth for the Martian equivalent of our CB.

In response to pressure from the MCC, the FCC has taken away most of the 2300 MHz band from Amateur use to allow the Martians to use it. This is in direct contrast to other written reports that it has been reallocated for aeronautical flight testing. There is sentiment in Washington that public knowledge of the MCC - FCC debate would spark widespread panic among the masses. It has been argued by Amateurs that Aeronautical Flight testing and Amateur communications could peacefully coexist in that area of the spectrum, and this reporter notes that there has been no reasonable arguments to the contrary of this. That is, besides the argument of the MCC.

The United States has conferred with other governments regarding this problem and most others are taking the same approach, removing the Amateur allocation there. The Canadian DOC has taken up the debate whether or not to generally deallocate this band from all use as essentially the U.S. has, but they have not reached a decision as of press time.

As you may already know by listening on this band, the Martians have already started using these frequencies. You can tell that the signals are Martian by the odd sounding noises that are a little like a police car's siren, only much faster rises and falls. According to some Martian connections this reporter has with Martians living here on earth, the rough translation of this noise is 'Fer sure, good buddy' with a slight south Martian twang on it.

Keep up to date on the FCC - MCC debate here in the Spark Gap.

Hamnews

How has the Volunteer Examination program been going you ask? Since the program began September 1 there have been 29 ARRL sponsored exam sessions with 1008 people taking exams. A total of 1335 exam elements were given and 639 passed, a success rate of 47.9%

ARRL Letter, December 6, 1984

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In a letter to Chairman Mark Fowler of the FCC, Senator Barry Goldwater, K7UGA, went on record opposing the reallocation of the Amateur 220 MHz band to other services. The senator's letter was very direct in its language: "There is an increasing demand for more services to the public which use radio waves, and most importantly, some new technologies being developed through experimentation permit more signals to co-exist within present bands. I think we especially need to encourage these. But, let's not knock down Amateur Radio once again in our efforts. The 220 MHz band is where we Amateurs can do a lot of experimentation with these new technologies that will benefit all spectrum users. Removing these frequencies from Amateur use is unnecessary, and would be short-sighted..." The senator concluded his letter by asking the FCC to keep "hands off" 220 so that Amateurs can continue using it for communications experimentation, as has been the case in the long history of the U.S. Amateur Radio Service. Tnx K3ZJ.

Westlink Report, December 14, 1984

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